

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1 and 2 (Canceled)

3. (Currently Amended) In an airborne projectile dispenser, the improvement comprising:

at least one spool for supporting a plurality of projectiles in substantially parallel relation, a collar retaining said projectiles within said at least one spool, and means for opening said collar to release said projectiles, said means for opening including means for timing the period of release of said collar to release said projectiles from said at least one spool in specific sequence following separation from said dispenser, and

plural spools and collars arranged in coaxial alignment, said collars being of variable radial diameter relative to each other, so that when said spools are arranged within said dispenser, individual projectiles within spools are laterally offset with respect to corresponding projectiles in other spools to obtain a uniform projectile distribution pattern when meeting a target.

4. (Original) The improvement set forth in claim 3, including a cable surrounding said collar, and timed means for cutting said cable to release said collar from around said spool.

5. (Canceled)

6. (Original) The improvement set forth in claim 4, in which said means for cutting said cable includes a capacitively powered circuit board.

Claims 7 to 10 (Canceled)

11. (Currently Amended) A projectile dispenser system comprising:
an airborne projectile dispenser having a principal axis;
a plurality of projectile-carrying spools carried by said airborne dispenser in axial alignment with said principal axis for serial discharge therefrom, said spools carrying plural projectiles in mutually parallel relation for radially-directed discharge from said spools;

means for maintaining said projectiles within said spools prior to discharge;

means for holding said means for maintaining in fixed position;

means for releasing said means for maintaining;

timing means for initiating operation of said means for releasing;

expandable bellows interconnected to said spools at one end thereof;

means for selectively inflating said bellows at timed intervals for serially-ejecting said spools from said airborne dispenser; ~~whereby~~ wherein said spools are ~~may be~~ positioned in mutually-axially aligned locations prior to discharge of projectiles from said spools.

12. (Previously Presented) A projectile dispenser system in accordance with claim 11, said expandable bellows being expanded by electrically ignited gunpowder of predetermined quantity, thereby determining the degree of mutual spacing of said spools.

13. (Currently Amended) A projectile dispenser system in accordance with claim 11, in which at least some of said spools comprise means for interconnection with an adjacent spool, ~~whereby~~ wherein at least a pair of spools are maintained in abutted relation after discharge from dispenser.

14. (Currently Amended) A projectile dispenser system in accordance with claim 11, in which the discharge of projectiles from each spool is timed such that each of the plural projectiles in mutually parallel relation has the same amount of time to expand before reaching a target.

15. (Currently Amended) A projectile dispenser system in accordance with claim 11, wherein said means for maintaining said projectiles within said spools prior to discharge is a collar.

16. (Currently Amended) A projectile dispenser system in accordance with claim 11, wherein said means for holding said means for maintaining in fixed position is a cable.

17. (Currently Amended) A projectile dispenser system in accordance with claim 16, wherein said means for releasing is a cable cutter.

18. (Currently Amended) A system for dispensing projectiles from a munition, the system comprising:

a plurality of spools, each spool arranged in sequential relationship along a linear axis and each spool including a plurality of projectiles; and

a bellows connected between at least two of the plurality of spools, the bellows expandable along the linear axis from a collapsed compacted state to an elongated extended state; and

at least one controller to initiate ejection of the plurality of projectiles from the plurality of spools,

wherein the controller initiates ejection of the plurality of projectiles on sequential spools in time-related manner such that initiation of each sequential spool is at an essentially common point in space.

Claims 19 and 20 (Canceled)

21. (Currently Amended) The system of claim 18, wherein the plurality of projectiles on at least one of the plurality of spools are all positioned with a head of each the projectile arranged in a common orientation.

22. (Currently Amended) The system of claim 21, wherein an aft stabilizing fin on a first group of the plurality of projectiles is offset from an aft end of

each of the projectile projectiles of the first group a first distance and an aft stabilizing fin on a second group of the plurality of projectiles is offset from an aft end of each of the projectile projectiles of the second group a second distance, the first distance different from the second distance and wherein a diameter of an aft portion of each of the projectiles is reduced by an amount approximating a thickness of the aft stabilizing fin.

23. (Previously Presented) The system of claim 22, wherein the first distance is at least one stabilizing fin length different than the second distance.

24. (Currently Amended) The system of claim 18, wherein the plurality of projectiles are is mounted on at least one of the plurality of spools with a at least one collar, the at least one collar having a flat inner surface adjacent at least an outer group of the plurality of projectiles and a curved outer surface.

25. (Previously Presented) The system of claim 24, wherein a thickness of the collar on each subsequent spool of the plurality of spools has a different thickness.

26. (Previously Presented) The system of claim 24, wherein the inner surface of a first collar on a first spool is mounted offset from a center axis of the first spool a different distance from the inner surface of a second collar on a subsequent spool, and the curved outer surface of the first collar and the curved outer surface of

the second collar are at a same radial distance from an axial centerline of the munition.

27. (Currently Amended) The system of claim 24, wherein the collar includes a plurality of portions and the an aggregate of each of the inner surfaces forms a geometric shape.

28. (Previously Presented) The system of claim 27, wherein the geometric shape is one of a hexagon and an octagon.

29. (Currently Amended) The system of claim 18, wherein the bellows are releasably connected to the two sequential spools.

30. (Previously Presented) The system of claim 18, wherein in the elongated extended state of the bellows, sequential spools are connected by the bellows.

31. (Previously Presented) The system of claim 30, wherein sequential spools are separated by a distance related to a forward traveling velocity of the plurality of spools such that every row of projectiles expands to a similar pattern and size.

32. (Currently Amended) The system of claim 18, wherein a length of the elongated extended bellows is a distance effective to produce results in a separation

distance between released projectiles of sequential spools sufficient to minimize interference drag.

33. (Previously Presented) The system of claim 32, wherein the separation distance is at least 5 inches.

34. (Previously Presented) The system of claim 18, wherein in the elongated extended state of the bellows, sequential spools are separated from the bellows and from each other.

35. (Previously Presented) The system of claim 18, comprising an ejection system to release the plurality of spools and bellows from the munition.

36. (Previously Presented) The system of claim 18, comprising means to remove an outer portion of the munition to expose the plurality of spools and the bellows.

37. (Previously Presented) A method of dispensing projectiles from a munition, the munition having a forward end and an aft end along a linear axis and including a system having a plurality of spools, each spool arranged in sequential relationship along the linear axis and each spool including a plurality of projectiles, and a bellows connected between at least two of the plurality of spools, the bellows expandable along the linear axis from a collapsed compacted state to an elongated extended state, the method comprising:

expanding successive bellows in a sequence from an aft end bellows to a forward end bellows;

releasing the plurality of projectiles from a first spool to form a first shape at a first point in a travel path of the plurality of projectiles from the first spool

releasing the plurality of projectiles from a second spool in a timed relationship relative to releasing the plurality of projectiles from the first spool to form a second shape,

wherein the plurality of projectiles from the second spool generally travel along the travel path of the plurality of projectiles from the first spool and the second shape is substantially similar to the first shape at the first point in the travel path.